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**PATENT**  
**Attorney Docket No. 05725.0830**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:	)
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<b>Véronique DOUIN et al.</b>	) Group Art Unit: 1617
	)
Application No.: 09/765,675	) Examiner: G. Yu
	)
Filed: January 22, 2001	) Confirmation No.: 6349
	)
For: NANOEMULSIONS COMPRISING AT LEAST	)
ONE AMPHIPHILIC LIPID, AT LEAST ONE	)
OIL, AND AT LEAST ONE CATIONIC	)
POLYMER, AND USES THEREOF	)

**Attention: Mail Stop Appeal Brief-Patents**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**RESPONSE TO NOTICE OF NON-COMPLIANT APPEAL BRIEF**

In response to the Notice of Non-Compliant Appeal Brief dated  
September 7, 2006, Appellants submit the following Summary of Claimed Subject  
Matter to correct the deficiencies in the original brief filed August 17, 2006. As this  
Response is filed within one-month of the mailing date of the Notice, it is timely filed.

**I. Summary Of Claimed Subject Matter**

The present invention relates to novel and unobvious oil-in-water nanoemulsions comprising oil globules with an average size of less than 150 nm comprising at least one oil, at least one amphiphilic lipid, and at least one cationic polymer comprising at least one hydrophobic block and at least one hydrophilic block, wherein the nanoemulsion has a turbidity ranging from 60 NTU to 600 NTU. See, e.g., claim 1; as-filed specification at page 4, lines 1-7, 10-14, and page 44, line 20 to page 45, line 2.

The present invention is also directed to the previously described oil-in-water nanoemulsion in which the cationic polymer is replaced with a nonionic polymer comprising at least one hydrophobic block and at least one hydrophilic block. For example, this embodiment is directed to an oil-in-water nanoemulsion comprising oil globules with an average size of less than 150nm comprising at least one oily phase, at least one amphiphilic lipid, and at least one nonionic polymer comprising at least one hydrophobic block and at least one hydrophilic block, wherein said nanoemulsion has a turbidity ranging from 60 NTU to 600 NTU. See, e.g., claim 78; as-filed specification at page 7, line 22 to page 8, line 1, and page 44, line 20 to page 45, line 2.

Another embodiment of the claimed invention is directed to an oil-in-water nanoemulsion comprising oil globules with an average size of less than 150 nm comprising at least one oil, at least one amphiphilic lipid, at least one cationic polymer comprising at least one hydrophobic block and at least one hydrophilic block, and at least one aminosilicone. See, e.g., claim 64; as-filed specification at page 4, lines 10-14, page 35, lines 21-23, and page 44, line 20 to page 45, line 2.

Other embodiments include compositions comprising the previously described nanoemulsion, such as compositions for topical use and for caring, washing, and/or making up a keratin material. For example, in one embodiment, there is disclosed a composition for topical use chosen from cosmetic compositions and dermatopharmaceutical compositions, wherein the composition for topical use comprises a nanoemulsion comprising oil globules with an average size of less than 150nm comprising at least one oil, at least one amphiphilic lipid, and at least one cationic polymer comprising at least one hydrophobic block and at least one hydrophilic block, wherein the nanoemulsion has a turbidity ranging from 60 NTU to 600 NTU. See, e.g., claim 68; as-filed specification at page 45, lines 12-21, page 46, line 19 to page 47, line 1, and page 44, line 20 to page 45, line 2.

There is also disclosed a composition for caring for a keratin material chosen from body skin, facial skin, mucous membranes, the scalp, the hair, the nails, the eyelashes, and the eyebrows comprising a nanoemulsion comprising oil globules with an average size of less than 150nm comprising at least one oil, at least one amphiphilic lipid, and at least one cationic polymer comprising at least one hydrophobic block and at least one hydrophilic block, wherein the nanoemulsion has a turbidity ranging from 60 NTU to 600 NTU. See, e.g., claim 69; as-filed specification at page 45, lines 12-21, page 46, line 19 to page 47, line 1, and page 44, line 20 to page 45, line 2.

There is also disclosed a composition for washing a keratin material chosen from body skin, facial skin, mucous membranes, the scalp, the hair, the nails, the eyelashes, and the eyebrows comprising a nanoemulsion comprising oil globules with an average size of less than 150nm comprising at least one oil, at least one amphiphilic lipid, and at

least one cationic polymer comprising at least one hydrophobic block and at least one hydrophilic block, wherein the nanoemulsion has a turbidity ranging from 60 NTU to 600 NTU. See, e.g., claim **70**; as-filed specification at page 45, lines 12-21, page 46, line 19 to page 47, line 1, and page 44, line 20 to page 45, line 2.

In another embodiment there is disclosed a cosmetic make up composition for a keratin material chosen from body skin, facial skin, mucous membranes, the scalp, the hair, the nails, the eyelashes, and the eyebrows comprising a nanoemulsion comprising oil globules with an average size of less than 150nm comprising at least one oil, at least one amphiphilic lipid, and at least one cationic polymer comprising at least one hydrophobic block and at least one hydrophilic block, wherein the nanoemulsion has a turbidity ranging from 60 NTU to 600 NTU. See, e.g., claim **71**; as-filed specification at page 45, lines 12-21, page 46, line 19 to page 47, line 1, and page 44, line 20 to page 45, line 2.

Other embodiments of the claimed invention include cosmetic make-up-removing compositions for a keratin material comprising the nanoemulsion. For example, there is disclosed a cosmetic make-up-removing composition for a keratin material chosen from body skin, facial skin, mucous membranes, the scalp, the hair, the nails, the eyelashes, and the eyebrows comprising a nanoemulsion comprising oil globules with an average size of less than 150nm comprising at least one oil, at least one amphiphilic lipid, and at least one cationic polymer comprising at least one hydrophobic block and at least one hydrophilic block, wherein the nanoemulsion has a turbidity ranging from 60 NTU to 600 NTU. See, e.g., claim **72**; as-filed specification at page 45, lines 12-21 and page 44, line 20 to page 45, line 2.

Other embodiments include non-therapeutic care processes for a keratin material comprising applying the previously described nanoemulsion. For example, in one embodiment, there is disclosed a non-therapeutic care process for a keratin material comprising applying to the keratin material a nanoemulsion comprising oil globules with an average size of less than 150nm and comprising at least one oil, at least one amphiphilic lipid, and at least one cationic polymer comprising at least one hydrophobic block and at least one hydrophilic block, wherein the nanoemulsion has a turbidity ranging from 60 NTU to 600 NTU. See, e.g., claim **73**; as-filed specification at page 47, lines 10-15 and page 44, line 20 to page 45, line 2.

There is further disclosed a non-therapeutic care process for a keratin material comprising applying to the keratin material a composition for topical use chosen from cosmetic compositions and dermatopharmaceutical compositions, wherein the composition for topical use comprises a nanoemulsion comprising oil globules with an average size of less than 150nm and comprising at least one oil, at least one amphiphilic lipid, and at least one cationic polymer comprising at least one hydrophobic block and at least one hydrophilic block, wherein the nanoemulsion has a turbidity ranging from 60 NTU to 600 NTU. See, e.g., claim **75**; as-filed specification at page 47, lines 10-15 and page 44, line 20 to page 45, line 2.

In addition, processes for thickening oil-in-water emulsions. For example, in one embodiment there is disclosed a process for thickening oil-in-water nanoemulsions comprising including at least one cationic polymer comprising at least one hydrophobic block and at least one hydrophilic block in the nanoemulsions comprising oil globules with an average size of less than 150nm and comprising at least one oil and at least

one amphiphilic lipid, wherein the nanoemulsion has a turbidity ranging from 60 NTU to 600 NTU. See, e.g., claim 77; as-filed specification at page 4, lines 4-10 and page 44, line 20 to page 45, line 2.

As discussed in the specification at page 1, the use of oil-in-water emulsions are known in the field of cosmetics and in the field of dermatopharmacy, for example, for the preparation of cosmetic products. In particular, nanoemulsions comprising amphiphilic lipids are known. Disadvantages with the nanoemulsions of the prior art comprising nanoemulsions are experienced, however, in that they are fluid. As discussed at page 3 of the specification, thickeners for aqueous media are also known. However, when certain polymeric thickeners are used in nanoemulsion-containing compositions, the resulting compositions may tend to exhibit problems in properties including stability and transparency, for example. At the time the present invention was filed, therefore, thickening systems which could conveniently thicken, or even gel, a composition in the form of an oil-in-water nanoemulsion with minimal influence on the cosmetic properties of the composition were desired.

Appellants have discovered that oil-in-water nanoemulsions comprising oil globules with an average size of less than 150 nm comprising at least one oil and at least one amphiphilic lipid can be thickened with at least one cationic polymer. The cationic polymer can be chosen from water-soluble and water dispersible cationic polymers, comprising at least one hydrophobic block and at least one hydrophilic block.

According to the present invention, the presence of such polymers comprising at least one hydrophobic block and at least one hydrophilic block in an oil-in-water nanoemulsion may improve the thickening, the transparency, and the stability of

compositions comprising the inventive nanoemulsions on storage. For example, Appellants have demonstrated that the thickening, the transparency, and the stability of a nanoemulsion comprising at least cationic polymer comprising at least one hydrophobic block and at least one hydrophilic block (Quatrisoft LM 200), at least one oil, and at least one amphiphilic lipid is greater than that of a nanoemulsion in which the at least cationic polymer comprising at least one hydrophobic block and at least one hydrophilic block is replaced with the same amount of Carbopol Ultrez, a crosslinked acrylic acid homopolymer. See Example 1 at pages 49-51. Accordingly, Appellants have shown the unpredictability of adding polymers to a nanoemulsion on its thickening, transparency, and stability.

**II. Remarks**


In the Notice of Non-Compliant Appeal Brief, the Examiner checked Box 4 alleging that the brief does not contain a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, referring to the specification by page and line numbers required under 37 C.F.R. § 41.37(c)(1)(v). In response, Appellants submit a revised Statement of Claimed Subject Matter as set forth above. Accordingly, Appellants submit that this response corrects the deficiencies in the original Appeal Brief filed on August 17, 2006, and request reconsideration of the Appeal Brief.

Please grant any extensions of time required to enter this response and charge any additional required fees to Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,  
GARRETT & DUNNER, L.L.P.

Dated: October 6, 2006

By:   
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